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Amendment "A" in Response to 06/06/2006 Office Action

Gregg Cantelmo, Patent Examiner

Art Unit 1745

Title: FUEL CELL POWER GENERATING SYSTEMS FOR

VEHICLES

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

(CURRENTLY AMENDED) A vehicle comprises a coolant system that 1. includes a radiator for said vehicle, and a fuel cell power system unconnected to said coolant system, said fuel cell power system being mounted on said vehicle for providing electrical power, heat and water to said vehicle, said vehicle and comprising a hydrogen-powered fuel cell mounted on said vehicle, a fuel cell processor connected to said fuel cell, and a reformer in said fuel processor, said fuel processor and said reformer producing substantially pure hydrogen from propane, a system for delivering relatively pure hydrogen to said fuel cell, a path from said fuel cell for delivering electrical power to said vehicle, a path from said fuel cell for delivering water to said vehicle, and a path from said fuel cell for delivering heat to said vehicle.

2. (CANCELED)

- 3. (ORIGINAL) The vehicle of claim 1 further comprising outlets for delivering heated air derived from said fuel cell to areas alongside said vehicle.
- 4. (ORIGINAL) The vehicle of claim 1 further comprising heat exchanger means for extracting heat from the heat output of said fuel cell, and for entraining said heat in air for delivery to said vehicle.
- 5. (CURRENTLY AMENDED) The vehicle of claim 1 further comprising a separator linked to the water outlet of said fuel cell for extracting water from the an air-water mixture from said fuel cell.

6. (CANCELED)

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7. (CURRENTLY AMENDED) The vehicle of claim 1 further comprising

a fuel processor, and a reformer in said fuel processor, said vehicle further including

a heat exchanger that extracts heat from said fuel processor, and then delivers said

heat through appropriate paths to desired areas of said vehicle.

8. (CURRENTLY AMENDED) The vehicle of claim 1 further comprising

storage for relatively substantially pure hydrogen mounted on said vehicle, said

storage being linked to said fuel cell for delivery of relatively substantially pure

hydrogen to said fuel cell.

(ORIGINAL) The vehicle of claim 1 wherein said fuel cell is a direct-9.

fuel fuel cell, and wherein said vehicle includes a storage system for said direct-fuel

mounted on said vehicle.

10. (ORIGINAL) The vehicle of claim 1 further comprising a storage

facility for storing liquefied propane aboard said vehicle.

(CURRENTLY AMENDED) The vehicle of claim 1 further comprising 11.

a fuel processor, said fuel processor generating generates heat and rejected

flammable gases.

12. (ORIGINAL) The vehicle of claim 11 wherein said fuel processor

further comprises a hydrogen purifier.

(CANCELED) 13.

(CURRENTLY AMENDED) The vehicle of elaim 13 claim 12 further 14.

comprising a gas accumulation reservoir that receives rejected flammable gases

from said hydrogen purifier, and rejected hydrogen and other flammable gases from

said fuel cell, for use in a burner device for producing heat.

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15. (CURRENTLY AMENDED) The vehicle of claim 1 further comprising

fuel cell electronics and balance of plant for said fuel cell.

16. (ORIGINAL) The vehicle of claim 1 further comprising a path from

said fuel cell to a converter for changing the voltage, amperage, or both, of electrical

power from said fuel cell, and from said converter, a path to power-consuming

means within or outside of said vehicle.

17. (CURRENTLY AMENDED) The vehicle of claim 1 further comprising

a fuel cell selected from the group consisting of polymer electrolyte membrane,

phosphoric acid, alkaline, solid oxides, and molten carbonate fuel cells, or,

alternatively, absent a fuel processor, further comprising a source of relatively pure

hydrogen, metal hydrides, or a nanotube storage system.

18. (ORIGINAL) The vehicle of claim 1 further comprising a heat

exchange system that delivers heat to an absorption refrigeration system or to an

absorption cooling system.

19. (ORIGINAL) The vehicle of claim 1 further comprising systems for

delivering flammable fuels from hydrogen purifiers, fuel cell stacks, or both, and for

delivering mixtures of rejected flammable fuels from purifiers, fuel cell stacks, or

both, to a burner in an absorption refrigeration system or in an absorption cooling

system.

20. (CANCELED)

21. (CANCELED)

22. (CANCELED)

23. (CANCELED)

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24. (CANCELED)

25. (ORIGINAL) The vehicle of claim 11 wherein said fuel processor

comprises a reformer of a desired geometrical shape.

26. (ORIGINAL) The vehicle of claim 11 wherein said fuel processor

comprises a hydrogen purifier of a desired geometrical shape.

27. (ORIGINAL) The vehicle of claim 25 or claim 26 wherein said shape

is selected from the group consisting of tubular, flat, round, elliptical, and

rectangular shapes.

28. (ORIGINAL) The vehicle of claim 26 wherein said hydrogen purifier

comprises a membrane of desired geometrical shape.

29. (ORIGINAL) The vehicle of claim 26 wherein said hydrogen purifier

comprises a support member and a membrane sealed to said support member.

30. (ORIGINAL) The vehicle of claim 29 wherein said support member

comprises perforated surfaces, porous materials, or both.

31. (ORIGINAL) The vehicle of claim 26 wherein said hydrogen purifier

further comprises a purification system selected from the group consisting of a

Pressure Swing Adsorption system, a Pressure Swing Temperature system.

Preferential Oxidation system, and a Chemical Absorption system.

(ORIGINAL) The vehicle of claim 1 wherein said vehicle is selected 32.

from the group consisting of a recreational vehicle, a marine vehicle, and a truck.

(CANCELED) 33.

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